DECEMBER 1980

DRIVER

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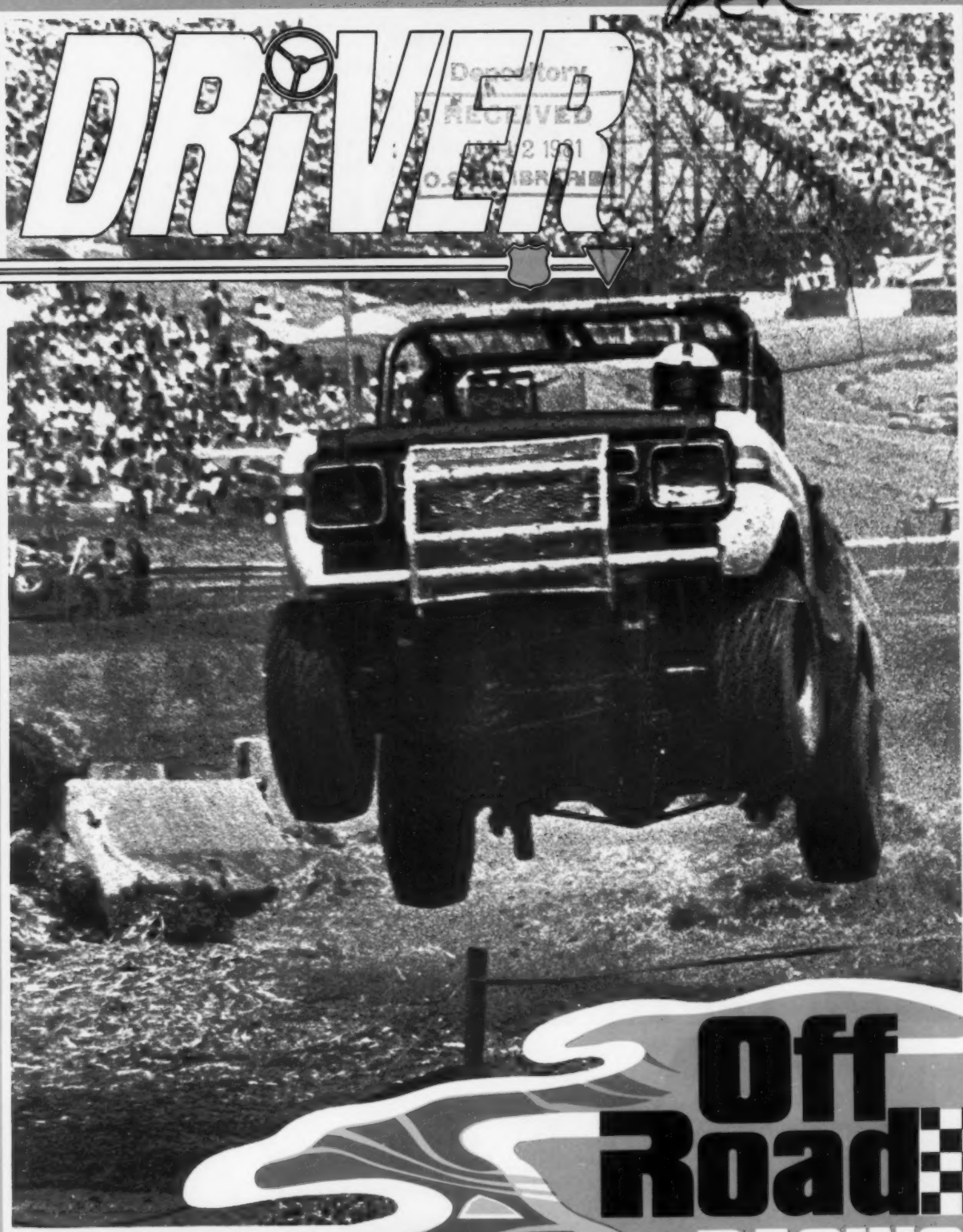
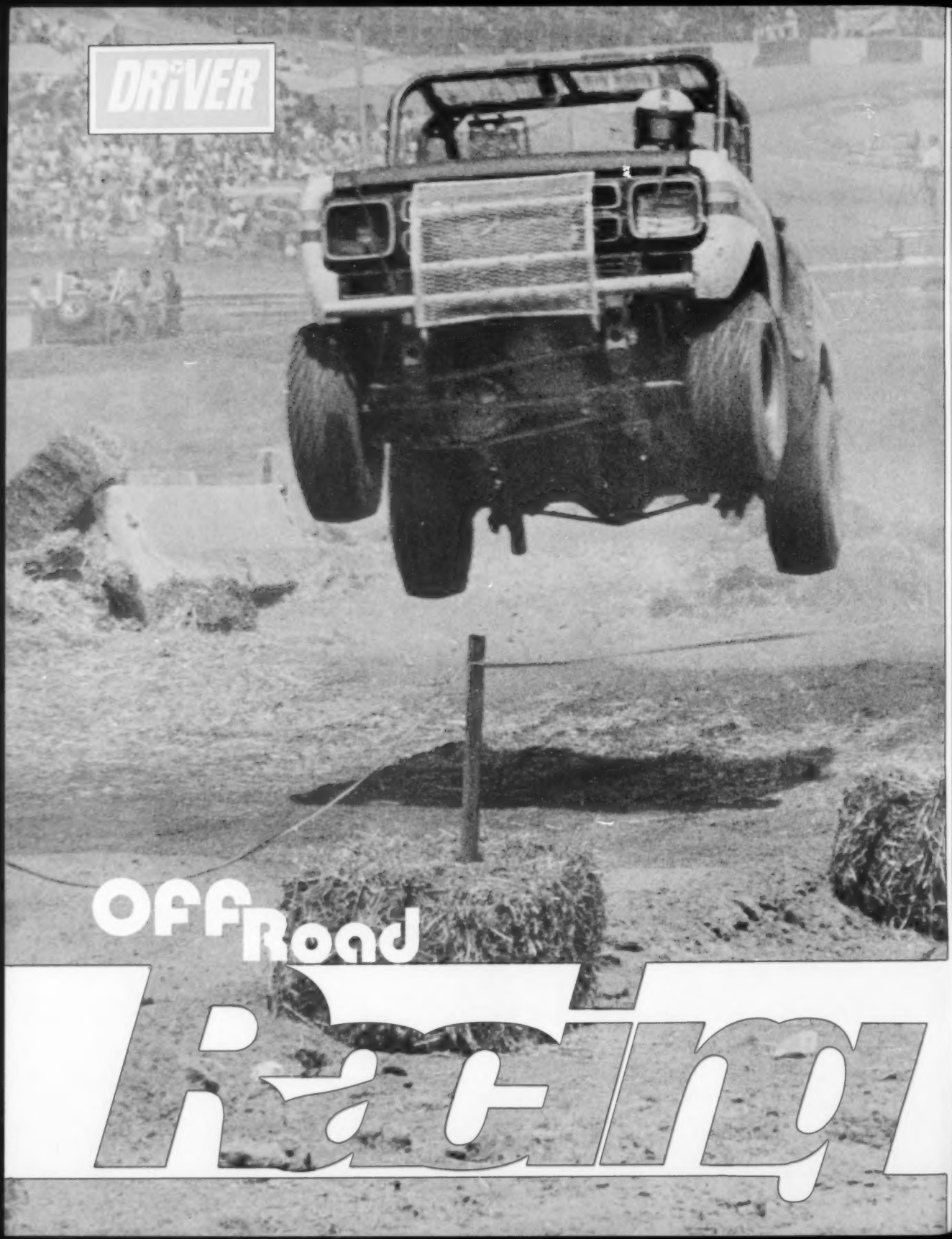


Off Road RACING


DRIVER
Off Road
Racing

It's just as good as Baja; Uh-huh! Uh-huh! Uh-huh!

The thrills of off-road racing are normally witnessed by a few hearty folks who venture into the depths of Baja (that's in Mexico, south of California, in case you're a newcomer) or the Mojave desert. Nevertheless, every year the biggest spectator attraction at Riverside, Calif., International Raceway is the Off-Road World Championships. From convenient grandstand seats, spectators see the sport's best drivers compete on a specially-constructed two-mile course that features virtually every kind of bump, berm and bog that would be encountered on a long-distance course.

Off-road racing has come a long way from the days of claims and counterclaims that led to the first Baja 1000. Before the granddaddy of off-road racing got started in 1967, motorcyclists and dune buggy drivers would boast of individual record times in making the trip from Ensenada to La Paz. However, with the inaugural Baja 1000 credibility was given to the times, and sanctioning organizations brought safety to the sport.

Usually the Baja race is a destination-type event from Tijuana, Ensenada or Mexicali south to La Paz. This is how it will be run again in 1981, although officials have hinted at running the race backwards — from La Paz to Ensenada. But this year marks the fifth time the event has used a "loop route" centering around Ensenada. This cuts some of the logistics problems associated with running the full length of the Baja peninsula. In turn, this makes it more economical as well as more convenient for the racers, their families and pit crews.

Taking a loop route and really tightening it until the racers have to run several laps over the same terrain changes off-road racing from a lonely sport of participants-only into a spectator sport. That is what has been happening for eight years at Riverside.

Part of off-road racing's tremendous growth can be seen in its major influence on the automotive aftermarket. Many of the products that were created for racing have found their way into street and recreational applications. This could be seen in the Riverside spectator parking lots, where thousands of machines closely resembled those actually racing.

And not the least of this aftermarket equipment was safety-oriented. There were massive roll bars, beefed-up suspensions, better braking systems and tires designed to take the tortures of off-road driving.

Yes, safety is part of this motoring sport. And this safety spills over into the crowd. Even though the speeds don't approach 200 mph as they do on so many clean, paved racing circuits, anytime a vehicle goes in a direction the occupants don't like, they are happy the machine can take the beating instead of their bodies. That's racing safety.

One look at Riverside's off-road course and everybody understands the beating machines have to take. When the drivers lined up for one of

continued

Single-seater, 1200cc buggies bump and bounce their way through the esses during the first of 12 laps. These machines have to be built tough to stand this kind of punishment.

(left)
Even the heavy four-wheel-drive utility vehicles put plenty of daylight between them and the dirt at times.

(right)
The safety crew rushes to the aid of Gary Paige after he failed to balance takeoffs with landings. This is one of the reasons for the full house of safety standards in off-road racing vehicles that begin with the best seat belts and shoulder harnesses available.

DRIVER

THE
TRAFFIC SAFETY MAGAZINE
FOR THE MILITARY DRIVER

DEPARTMENT OF THE AIR FORCE
HQ AIR FORCE INSPECTION AND SAFETY CENTER
Norton Air Force Base, California 92409

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DEC

VOLUME 14 NUMBER 7

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THE EDITOR SPEAKS DOUBLE CLUTCH

MORE ABOUT AIR BAGS

In August this column brought you up to date on air bags — those controversial safety devices we've been reading and talking about for years but that few of us have ever seen. The bottom line on our August column was that the only car you were likely to see an air bag in before 1983 was the Mercedes Benz. The big American car companies were saying "air bags a low-volume option 1983-86."

Now Congress has proposed substantial revisions in the federal passive-restraint standard, and for the first time it appears that certain auto makers will be required to offer air bags in some of their 1982 models. If approved by the House or Senate, as now seems highly likely, the bill would require Ford, GM and some "large-volume imports" (Toyota, Nisson, and Volkswagen) to offer bags on at least one car line, beginning with the 1982 models. Volvo says it will voluntarily offer them, too.

More significantly, the bill reverses the method of phase-in, requiring passive restraints — either air bags or automatic belts such as those offered on Rabbit and Chevette — on small cars first in '82 rather than on large cars as originally specified.

Meanwhile, the General Accounting Office (GAO is the investigative arm of Congress) says that three-point belts are three times more effective than air bags in rear impacts, four times more effective in side impacts, and 15 times more effective in roll-overs. GAO also says bags probably won't inflate in 47% of the serious-injury and fatal accidents and will add $300 to the car cost. Detroit says it's more likely to be $500. And the enthusiast magazines are saying it will cost about $700 to replace a bag after it goes off, which will certainly do something to insurance prices.

Are there really air bags in our future? We'll keep you posted.

continued

(left) **Despite soaking** the entire two-mile off-road course in water for two weeks prior to the world championships, the desert soil still required continuous watering between races to keep dust to a reasonable level. (right) **From time to time,** course-watering included spectator-watering as fans ventured onto the track to be cooled off.

Marty Letner was the weekend's big winner as he took both Pepsi Challenge of Champions on Saturday and the Class 1 (unlimited single seater) race Sunday. Odds on favorite at 3-1 before the weekend, Letner took home $30,371, the most money one driver has ever earned in a single weekend at Riverside.

Sometimes the fastest vehicles on four wheels have to be the fastest "off" four wheels, also. Here Dennis Hamilton flies to a second-place finish in the Pepsi Challenge of Champions and a $6,000 paycheck.

the 18 races around the manmade "mini-Baja" course, they thought they had wandered into a motocross race instead of a typical off-road chase. Every race featured a "go for broke" start. The competitors were flagged off side-by-side, as many as 30 across. They roared across a bumpy, hilly section of dirt and grass inside the raceway's turn eight to reach the official starting line, funneling in from a 400-foot-wide starting line to a 50-foot roadway.

continued

"Faster than a speeding tank; more powerful than a bulldozer; able to leap out of the muckiest bog in a single bound; it's a J. D. Brand Heavy Metal Challenge pickup truck." The dance of 4,000-pound pickups requires substantial beefing up of all components.

(top, middle) **The first start** of the last race of the weekend had Monte Crawford tumbling end-over-end at the point where the course narrows from 400 to 50 feet wide. (bottom) **On the restart** of the final event, Jerry Whelchel flipped on the opposite side of the track from Crawford's earlier tumble.

continued

(left, right to left) **John Johnson** (#552) leaps his 1600cc Baja Bug hard enough to buckle the front tires on landing. Although Johnson's teammate, Earl Hardesty (#559), averaged only 37.569 mph in winning this class, the safety features in each VW resembled those found in 200 mph NASCAR racers. Not only were the Beetles reinforced to take a lot of punishment, they also had complete roll cages as well as window safety nets.

Jumping a motorcycle is an art most of the 70 riders mastered.

(left) **Off-road** racing motorcycle riders wear the best helmets, quality goggles, heavy gloves, big boots and plenty of body padding.

Once they negotiated a tricky "esse" and began a familiar speed run toward the main grandstand on fearsome Thompson Ridge, they were confronted with a reverse camber dropoff, crossed the pavement of the road course and picked their way through a rutty section on the outside of the track, crossed over again and rejoined the race along the ridge. If the rugged terrain was not enough to inspire the safety-minded, there were some very substantial concrete walls to make them feel vulnerable.

To insure that all participants protect themselves, race organizations establish strict safety rules which are fully enforced with pre-race inspections. And protected they were. Of the 300 drivers who covered nearly 7,000 racing miles during the weekend, and untold practice laps, only three were injured — two in the final event of the weekend.

The final event actually started twice. On the first start Monte Crawford tumbled end-over-end, bouncing high in the air and causing the race to be redflagged — stopped. Crawford was released after an ambulance trip to a local hospital for examination. During the early laps of the restarted race, Steve Kelley lost consciousness and rode along in his car for some distance before the car came to a stop. He was freed from the car by rescue workers, transported to the hospital by ambulance and released after X-rays for possible back injuries. The only other hospital patient of the weekend was motorcycle rider Lee Evans, who suffered a hip injury and was kept overnight.

The record speaks for itself.

continued

continued

Winners during the Bridgestone SCORE Off-Road World Championships, the vehicles they drove and their average speeds were:

CLASS 1
(Unlimited single-seaters)
Marty Letner, Raceco, 40.730 mph

PEPSI CHALLENGE OF CHAMPIONS
Marty Letner, Raceco, 42.042 mph

CLASS 1-2
(1600cc dune buggies)
Monte Crawford, Chenowth, 38.215 mph

CLASS 2
(Unlimited two-seaters)
Martin Tajra, Chenowth, 40.179 mph

Class 3
(Production four-wheel drives)
Roger Mears, Jeep, 35.439 mph

CLASS 4
(Modified four-wheel drives)
Grant Randall, Jeep, 34.191 mph

CLASS 5
(Baja Bugs)
Jim Taber, VW, 39.790 mph

CLASS 5
(1600cc Baja Bugs)
Earl Hardesty, VW, 37.569 mph

CLASS 6
(Production automobiles)
Don Ellis, AMC Pacer, 30.496 mph

CLASS 7
(Mini pickups)
Roger Mears, Datsun, 31.899 mph

CLASS 8
(Utility pickups)
J. D. BRAND HEAVY METAL CHALLENGE
Ivan Stewart, Ford, 36.268 mph

CLASS 9
(1200cc single-seaters)
Glenn Harris, Funco, 37.427 mph

CLASS 10
(1200cc VW-powered two-seaters)
J. C. Myers, Homebuilt, 37.587 mph

CLASS 11
(Showroom stock VWs)
Jan Wright, VW, 28.488 mph

CLASS 20
(125cc motorcycles)
Rick Maki, Yamaha, 40.802 mph, 1st heat
39.932 mph, 2nd heat

CLASS 21
(250cc motorcycles)
Lenny Giger, Honda, 42.103 mph, 1st heat
41.376 mph, 2nd heat

CLASS 22
(Open motorcycles)
Eric McKenna, Maico, 41.978 mph, 1st heat
41.806 mph, 2nd heat

Production four-wheel-drive winner Roger Mears plows along the lower edge of Thompson's Ridge at 85 mph while Brad Roydhouse fights to keep the muck from pulling his vehicle off the track. Off-chamber turns, haybales and concrete walls make safety equipment doubly important.

Grant Randall urges his modified four-wheel-drive vehicle through the bog among the haybales, having already lost his right rear fiberglass fender to an obstacle. By the time he had completed 12 laps and won his class what's left of the right front fender was gone, too.

CLASS 30
(Motorcycle riders 30 and older)
Richard Jackson, Husqvarna, 37.624 mph, 1st heat and overall
Lon Peterson, Yamaha, 41.945 mph, 2nd heat

CLASS 38
(Motorcycle riders 38 and over)
David Miller, Husqvarna, 37.243 mph, 1st heat
39.714 mph, 2nd heat

Timely Topics

RIGHT-OF-WAY

Question: Who has the right-of-way at an unsignalled intersection?

Answer: It depends. 1. If you are traveling on an unpaved road that intersects with a paved road, *you must always yield to cars on the paved road.* 2. If you are on a single or two-lane road intersecting with a multiple-lane road, *you must always yield to vehicles traveling on the multi-lane road.* 3. If you are approaching an intersection not controlled by signs and signals (or the multi-lane or paved provisions above), *you must always yield to any vehicle which has entered the intersection, or to any vehicle to your right which reaches the intersection at the same time you do.*

ALONG THE BURMA ROAD

The American motorist is a fortunate person, indeed, especially when compared with his counterpart in Burma, says the Automotive Information Council (AIC).

In the U.S., with a population of about 230 million people, there are 120 million passenger cars. In Burma, with 35 million people, there are only 39,000 cars, many of which are more than 30 years old.

Burma has banned luxury imports — and they consider a car a luxury — for 18 years, so desperation and unusual driving practices keep the ancient vehicles rolling.

A *Los Angeles Times* reporter tells of being in a taxi which had run two red lights. When the driver was asked why, he merely said "no brakes," as he shifted into low gear to bring his 1947 Chevrolet to a screeching halt against the curb.

World War II Jeeps and trucks are common and even the army uses them. A tour guide drives one that was built in 1944. Sometimes the gears fail to mesh so the owner takes the top off the gearbox, pokes around inside with a screwdriver and gets things back in working order.

At the Rangoon airport a visitor may have the choice of a 1940 Chevrolet, a 1946 Nash or a 30-year-old Vauxhall as taxis.

The driver of a 1947 Chevrolet pickup truck which has been converted to a minibus, when asked how he gets spare parts, said he uses Japanese spare parts, without explaining to the reporter how they fit into a Chevy.

They tell the story in Burma of how a member of Italy's Agnelli family, which makes Fiats, was so taken with a 1936 Fiat roadster that he offered the owner 10 times the original price. The owner refused to sell, saying he wouldn't be able to buy another to replace it.

THE STRANGE HISTORY OF THE VOLKSWAGEN

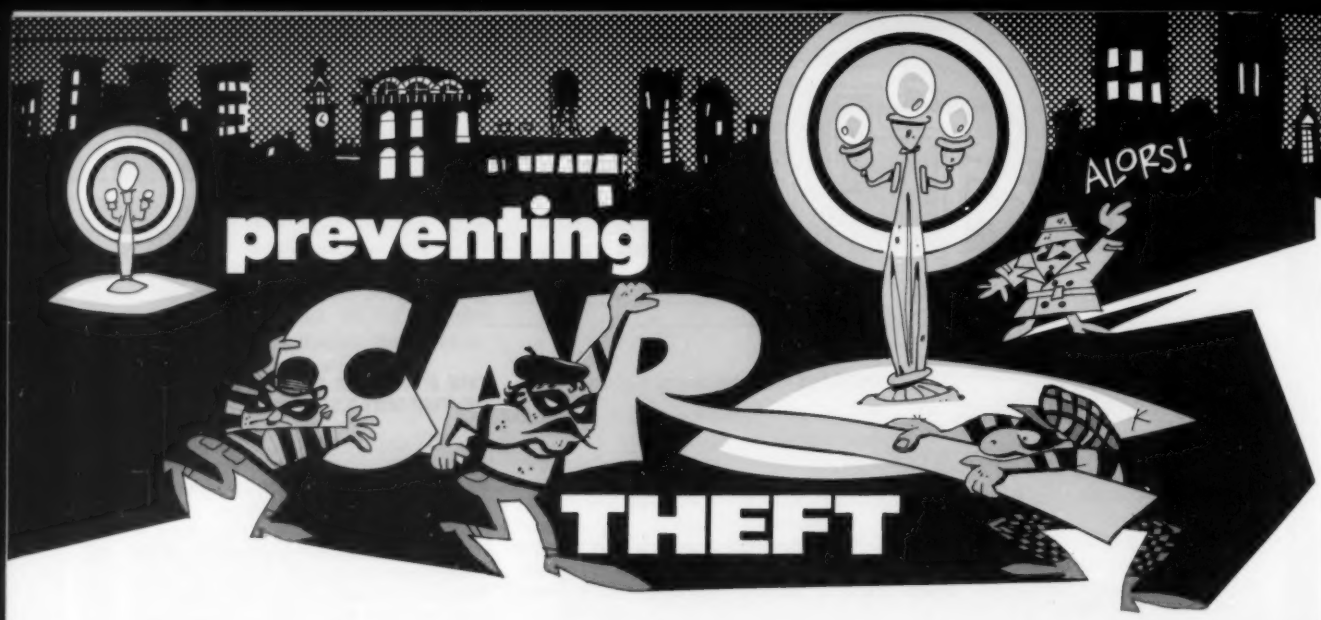
Few VW owners know it, but Adolf Hitler played a prominent role in the creation and initial production of the world-famous "bug." In the early 1930s, for propaganda reasons, Hitler wanted to promote a "peoples' car." He insisted that it must be a four-seater for families and get 40 mpg. Ferdinand Porsche, the great sports car designer, and Karl Rabe conceived an original design essentially the same as the one we know today. The car was immediately nicknamed — you guessed it — "the beetle." Hitler wanted to call it the "Strength-Through-Joy Car," but the name didn't catch on, thank goodness. The VW company was formed in 1937 with funds from the German government; but it took a while to gear up, and only 210 VWs were manufactured before the plant shifted to war production. During WW II VW produced the *Kubelwagen,* a kind of bug-shaped jeep. The plant also turned out an amphibious water-tight VW with snorkel and propeller, called the *Schwimmkubel.* Honest . . .

A final note. After WW II, several auto makers from the Allied side were offered the bombed-out VW plant. An advisor to Henry Ford II reportedly said it wasn't "worth a damn."

(Texas Dept. of Highways)

FEMALE SUPERIORITY???

Statistics indicate that in a strict, mile-for-mile comparison women drivers have ten percent *fewer* accidents than men. Women also have far fewer *fatal* accidents. Young male drivers have a fatality rate four times higher than females. Some psychologists speculate that this is because women, unlike men, have no compelling need to prove their "machismo" by acting out feelings of aggression and strength behind the wheel of a car . . . Any comments, men?



preventing CAR THEFT

Imagine walking out of your barracks, keys in your hand, on your way to a local disco to meet some friends. You have your flashiest clothes on, along with your best boogie shoes. You come out to where your car is parked only to find it is where your car *used* to be parked. All you find that you can call your own are a couple of oil drips.

Or imagine that your car is there. You get in, reach for the "Born to be Alive" cassette and stab at the tape player with it, only to find a large empty hole in the dash where the player *used* to be.

Some of you out there don't have to imagine that hard, because you've already been a victim of auto thieves. If you have, you know the helpless, angry feeling of wanting to kick something and not having anything to take it out on. It's not a nice feeling. You've spent a lot of money, that you worked pretty hard for, to buy a nice car or some nice accessories for it. And then some jerk comes along who thinks he has more rights to it than you do, and he takes it away.

We don't blame you for being angry. We'd feel the same way. However, it's a little late to think about theft now. What we want to do is go back in time a little and see what you could have done to *prevent* the jerk from stealing your property.

First, though, let's look at the problem of auto theft. How big a problem is it? Who commits these thefts? How do they steal the cars (or their accessories)? And what do they do with them?

The problem: The Automotive Information Council reports that a car is stolen every 32 seconds in the United States, or nearly a million cars a year. (The California Highway Patrol reports about 170,000 are stolen in that state annually.) When you consider that there are around 120 million cars in this country, the 1 million figure leaves you with a one in 120 chance of having it ripped off. We don't like the odds and we don't think you do either.

After it is stolen what are your chances of getting it back? The American Automobile Association, the largest insurer of cars in Southern California, reports that for the cars it insures, 29 percent of the stolen autos are not recovered at all. An additional 30 to 40 percent are found stripped. So not only are your chances of being victimized too high, your chances of getting your property back are too low.

Who are the ones who are doing the stealing? Is it the popular conception of the car thief — the "joyrider"? Joyriders or "transportation thieves," those who steal cars to get them somewhere, used to be responsible for 75 to 80 percent of all car thefts. Now they are only about 20 percent of the problem.

More common today are the money thieves, those who steal cars for the money they can make. Money thieves can be amateurs or professional thieves; they may steal entire cars or just parts of them; they may be members of car theft rings or they may work alone.

Money thieves undoubtedly make a good profit for their "work." Car theft in America is definitely big business. It is expected to hit *$6 billion* this year.

The money thief steals a car and sells it (or parts of it) to a middle man, who in turn will sell to customers. These customers may or may not know they are purchasing stolen goods. (By the way, if you purchase a vehicle that the police discover has been stolen, they will confiscate it, and you'll get nothing, even if you bought it in good faith. Be *very* careful.)

In the case of an entire car, the middle man will have to change the vehicle identification number (VIN). He may repaint the vehicle, or he may sell it "as is." This latter case is a common one, because many vehicles are "stolen to order." The middle man, perhaps posing as a used car dealer, will get an order for a specific make and model, and fill that order by having a thief steal one like it.

Even more common today is stealing of cars for parts. The saying goes "If you want to build a $10,000 car, you need $30,000 worth of parts." What this means is that the profit margin on individual parts is very

high, and therefore car thieves can make much more money by dismantling a car and selling it in pieces.

A car thief may sell a stolen car to a "chop shop." This is a special facility at which the car is taken apart for sale of the parts to scrap yards and body repair garages. They often sell at bargain prices.

Chop shops may work on custom orders. A repair shop may need a complete front end for a damaged luxury car. He may call a salvage yard which, in turn, will notify other yards of the need via the salvage teletype network. An operator dealing in stolen parts will respond that he has the parts and will set a price. He then will contact a car thief who brings a similar model to the chop shop and the parts are delivered to the body shop.

Breaking and entering: So that's what they do with the cars once they get them. How do they get them? It's actually just a simple matter of finding the car they want and taking it. The California Highway Patrol tells us that there are car thieves at any high school, and most junior high schools. Further, the CHP says that almost anyone with a little knowledge and the right tools can steal a car.

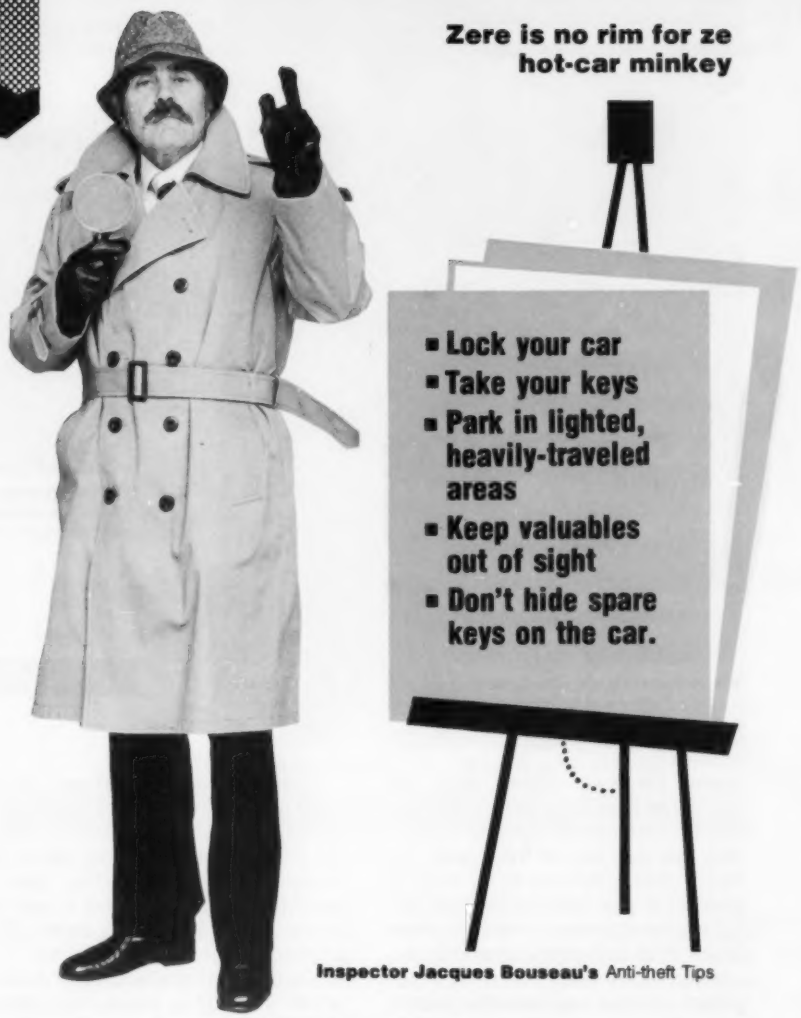
To find the car he wants, the thief must "shop." (Yes, that's what they call it.) If he's been asked by a middle man to find a certain make and model, he'll look for that one. If not, he'll look for the easiest car to steal. That's the one with the doors unlocked and the keys in the ignition; 40 *percent of the cars that are stolen have the keys in them.*

The thieves look on obvious places, like public parking lots at shopping centers, and in residential areas, especially apartments.

If the car they want is locked with no keys in it, they have to break in. They may use a bent coat hanger or similar device to wedge in and work the door lock button, or they may go for the locking mechanism itself inside the door. If all else fails, and they want it badly enough, they might break a window. Once inside they may hot-wire the car, if it's an older

continued

Zere is no rim for ze hot-car minkey


▪ Lock your car
▪ Take your keys
▪ Park in lighted, heavily-traveled areas
▪ Keep valuables out of sight
▪ Don't hide spare keys on the car.

Inspector Jacques Bouseau's Anti-theft Tips

Investigation. "I examine ze clues and . . . ze case is solved."

Miscellaneous anti-theft devices. "Now, Hercule . . . you weel stay een the car and eef anyone tries to get een, you weel bite heem, just a leetle . . ."

Miscellaneous anti-theft devices. The car alarm. "Dynamite? What do you mean, you idiot? Of course I deen't put dynamite een my car! Eet would ruin ze upholstry!"

model. On newer models, they simply use an auto body shop slide hammer to rip out the ignition lock. Then they can start the car from under the hood. Some thieves even have a phony key and ignition they can put in the steering column so everything looks okay to a casual observer.

Which cars? Were you a little surprised when we said something about hot-wiring a car? "Nobody steals those old clunkers; they're not worth anything." Don't kid yourself.

Here are the six most popular cars for thieves, courtesy of the California Highway Patrol: 1964 Chevrolet Impala. 1965 Chevy Impala. 1966 Volkswagen sedan. 1967 VW sedan. 1963 Impala. 1965 VW sedan. Notice a pattern? These cars are becoming "collector's items." Also, they were made before the steering column ignition systems were introduced, making them easy to hot-wire.

Does that mean your '75 280-Z is safe? Don't count on it. Virtually *any* car is a target. If it isn't a target for a car theft ring or for someone shopping for parts to repair his car, it could be hit on by a transportation thief. So anyone from the owner of a "beat-up old '69 Dart" to the guy with the '81 Mazda RX-7 is vulnerable.

There are no guarantees. As a CHP friend of ours told us, "If you don't want your car stolen, don't buy one." But that half-joking piece of advice isn't practical. For many, perhaps most of us, a car is not a luxury item, it is a necessity. So what's being done to help?

The auto manufacturers themselves are taking steps to prevent theft. Many are factory-installing alarm systems in their more expensive cars.

Chevrolet, for instance, reports their auto alarm on Corvettes now has a starter interrupt feature that prevents starting the engine after any forced entry — even when the ignition switch has been bypassed.

Other car makers are trying even more measures. Cadillac is putting special labels on the body parts of its cars, printed with the 17-character vehicle identification number (VIN). The luxury car-maker hopes these labels, which cannot be altered or reused, will discourage thieves from dismembering Cadillacs.

Praiseworthy though these attempts may be, the responsibility for preventing car theft remains with the owners of the automobiles. And that's you folk out there. Read on; we've got some suggestions for you.

the least

We hope we've painted a fairly grim picture of the auto theft problem. We hope so, because it *is* grim.

If we have, we've done our job, and we can now tell you how to reduce the chance of being ripped off. If

continued

Gaining entry. A bent coat hanger is only the most simple device for breaking into a car.

The Inspector hoists the thief by his own coat hanger.

t you can do

you're not convinced, read the other section over again. We're not exaggerating.

Before we begin with the anti-theft tips, we want to caution you: If a thief wants your car badly enough, he *can* take it. For every anti-theft measure, there is a way around it. For every anti-theft device, there is a way to render it inoperative. All these things do is make it *less likely* the thief will take your car.

But that's okay, too. Thieves would rather not take a car that will be difficult to steal; they'd rather go for an easy one. Say there are two identical cars sitting side by side. One has the doors locked. The other has the windows down, with the keys in it. Which do you think the thief will rip off?

continued

(left) **Park only** in the well-lit, heavily traveled areas of parking lots. Thieves do not like an audience when they work. (right) **In the same** parking garage, but in a more isolated area, the thief's task is much easier.

continued

Now, read these ideas for simple ways to make your car less attractive to thieves. They are the least you can do, and they might be enough.

- Lock your car. No matter where it is parked, even in front of your house, it is an easy target if it's left unlocked.
- Take the keys with you. Remember we said 40 percent of the stolen cars had keys in them. Those people have nobody to blame but themselves.
- Park where there is plenty of light, and where there is a lot of auto travel. Thieves like to be as inconspicuous as possible, which they can't when they are out in the open.
- Keep all valuable items out of sight. Put them in the trunk, if possible. Don't tempt thieves.

Leaving your keys in the ignition leaves you open to more than just car theft. The thief can find out who you are from the car's registration and use the other keys to rob your house.

- If you park in an attendant parking lot, leave only the ignition key. They have no need for the trunk key, or your house keys.
- Mark the car's accessories with your driver's license number. Items to mark include the bucket seats and wheels, as well as the radio and stereo tape player. This will help identify your property in case the items are stolen and later recovered.
- Other things to mark are removable recreational equipment, like campers and ski or bike racks.
- Do NOT carry the owner's certificate ("pink slip") in the car. Also, do NOT leave credit cards in the car. Carry the legal description of the car, the license number and vehicle identification number (VIN) with you.
- Do NOT hide spare keys on the car, or under the floor mats, or in the glove compartment, or over the sun visors. Thieves can find these very easily.

All those suggestions are very simple. But considering that 40 percent of the stolen cars in this country have the keys left in them, just following the first two of these hints could reduce the car theft problem considerably. By as much as 40 percent? We don't know. But wouldn't it be nice if we could find out?

what more

Perhaps you don't see the preceding ideas as being sufficient to stop a thief. Maybe you follow those hints and were ripped off anyway, or maybe you just want to do more to prevent losing your property.

There are more involved methods you can employ, using various anti-theft devices. There are a wide variety of these devices on sale. There are devices that make it difficult to take the car away, that make it difficult to break into the car without attracting attention, that make it difficult to steal accessories from the car . . . Note, we said "difficult." As we mentioned before, if the thief wants the car or its contents badly enough, there are ways he can get them. The idea behind anti-theft devices is to prevent the theft *if possible*, or at least make it more trouble than the thief wants to bother with. If he gets slowed up, he'll "shop" elsewhere.

Here are a few of the devices:

- Install the tapered doorlock buttons instead of the standard manu-

(right)
The California Highway Patrol provided this rather graphic display of what happens to the stolen car. The car on the right was a Camaro much like the other, until it was stolen, stripped and burned.

e can you do?

facturer's type. These cannot be lifted with the end of a coat hanger or similar tool.

- Put decals for anti-theft devices on the car, even if you have no such devices installed. These will warn off some thieves, and some others might waste time looking for non-existent devices before giving up.
- Install different locks for the doors from the one on the ignition, if your car is not already so equipped. This will make things difficult for the thief with a set of keys.
- Install a hidden engine-kill or fuel cut-off switch. Such a switch may make some thieves give up, but realize that experienced thieves will know all the obvious places to hide a switch. You'll have to be creative.
- Buy one of the cane-like devices that locks the steering wheel to one of the pedals on the floor. This would prevent the thief from driving the car away, though not from stealing accessories out of the car.
- Car alarm systems are more expensive than the other items we've listed here, but they might be worth the investment, especially if your car is worth more. They come in many different styles — some systems connect to the car's horn, and some have a separate siren; some connect to the car's ignition and some have separate locks on the outside of the car. There is even an alarm that sends a signal to a small electronic "beeper" that the owner carries. (These have a limited range.)

If you're interested in car alarms, we suggest you look at some publications like *Consumer Reports* that compare and rate such items. Make your own choice.

One more note on alarms: An insurance company expert we talked to cautions potential alarmers to stay away from factory-installed alarms, because he says thieves can easily defeat them when they know what alarm is in the car. He recommends that buyers get different types, to keep the thieves guessing.

We like some of these items, but we want to state it once more: The most effective thing you can do is to lock your car and take your keys with you.

the cost

You noticed earlier that we said car theft is big business. That's where someone makes a profit off your car by taking it and selling it, or taking it *apart* and selling it. Doesn't that make you mad? Well, think about another way you lose when your car is stolen — in insurance.

A very common reaction to car theft is "So what if they get the car? It isn't worth that much. And besides the insurance will pay for it." Yes, but at what cost to you? Remember, you're paying for that insurance. And the epidemic of car theft raises the premium on your insurance.

The American Automobile Association, perhaps the leading car insurer in Southern California and in the top 10 nationwide, reports that AAA claims for auto theft will probably reach at least $18 million this year in Southern California alone. The average claim is $2,906.

What about the other costs of auto theft, the ones that would hit you even if the insurance company covered the entire cost of replacing the car? Everyone carries items in their car that are not part of it, for instance clothes, extra tools, stereo tapes, etc. These would not be covered by the auto insurance policy. Neither would that expensive stereo tape player that you put into the car to replace the original equipment, unless it was so stated on your insurance policy. If the car was stolen, you'd be out of luck.

There are still other costs you might not think of. Most insurance policies provide for the rental of a car for a short time in cases of theft. But these provisions often do not cover the full cost involved. And there is the time you would need to take off work to make reports to the police and such. This will also cost you money.

Yes, your insurance *will* pay you. But perhaps not the full cost of the theft. It's something to be aware of.

MOTORCYCLE SAFETY EDUCATION

	Operator	Passenger
Course 7 completed	15	3
No Course 7	18	3
Unknown	3	—
Total	**36**	**6**

BY COMMAND

	JAN - SEP		AS OF 31 OCT 80
	1978	1979	1980
TAC	9	9	16
SAC	7	8	6
MAC	2	4	2
ATC	0	3	6
USAFE	1	1	5
PACAF	2	0	2
AFSC	2	0	0
ESC	1	0	1
ADC	0	1	0
AFLC	0	0	1
AFCC	0	0	1
NGB	0	0	1
USAFA	0	0	1
Total	**24**	**26**	**42**

AIR FORCE MOTORCYCLE FATALITIES

By Month and Year

	1978	1979	1980
January	1	2	2
February	1	0	4
March	1	0	3
April	3	1	6
May	4	5	7
June	2	13	1
July	4	1	5
August	5	2	7
September	3	2	3
October	3	4	3
November	2	2	—
December	1	1	—
Total	**30**	**33**	**42**

HELMET USE

	Operator	Passenger
Used	20	1
Not Used	11	3
Worn But Lost	3	2
Unknown	2	0
Total	**36**	**6**

TYPE MISHAP

Motorcycle at "fault"	24
— single vehicle mishap	14
— crossed into oncoming lane	5
— failed to yield at intersection	2
— struck railroad train	1
— failed to make curve (too fast)	2
Other vehicle at "fault"	14
— crossed into oncoming lane	2
— turned into motorcycle lane	2
— pulled across motorcycle's lane	3
— failed to yield at intersection	5
— struck rear of motorcycle	2
Unknown	5

TIME OF DAY BY DAY OF WEEK

Hours	M	T	W	T	F	S	S	Total
0600-1159	1	0	0	0	0	1	0	2
1200-1759	0	3	3	1	1	1	4	13
1800-2359	0	2	2	1	4	3	3	15
2400-0559	3	0	1	1	0	1	5	12
Total	**4**	**5**	**6**	**3**	**5**	**6**	**12**	**42**

ALCOHOL INVOLVED

	Operator	Passenger
Yes	10	3
No	22	2
Unknown	4	1
Total	**36**	**6**

DISTANCE FROM BASE

On base	2
0-5 miles from base	15
6-25 miles from base	12
26-50 miles from base	0
51-100 miles from base	0
Over 100 miles from base	7
Unknown	6
Total	**42**

TYPE OF MOTORCYCLE

Size:		Make:	
175	1	Honda	14
300	1	Yamaha	5
360	2	Harley	4
360	2	Kawasaki	7
400	6	Suzuki	2
500	1	Unknown	10
550	1	**Total**	**42**
650	1		
750	7		
900	1		
1000	6		
Unknown	13		
Total	**42**		

Hello

I am writing to you because I am personally concerned about you. Naturally, you are an important asset to the USAF because of the specialized training you have received and the daily contributions you make to the readiness of our Armed Forces. More important than that though, each of you has the opportunity to enjoy many more years of bike riding as I have. I don't want you to waste your youth and possibly your life because of a preventable needless riding accident.

My 27 years in the USAF has presented me with outstanding opportunities to ride in many foreign nations and through much of our great country. I know the exhilaration of riding on the open road and through the canyons as well as the frustrations of stop-and-go traffic. I have also experienced close calls where it appeared that the four-wheel driver either didn't see me or misjudged my closure rate. However, my enjoyment in riding greatly overshadows any irritants.

Unfortunately, we all know of friends or co-workers who will never experience the joy of riding again. Some thought protective equipment was for sissies. Others felt the required motorcycle courses were just harassment and, anyhow, riding a big bike was just as easy as a 125. Still others were intoxicated by the speed of their machine and made only a small miscalculation. Entirely too many others thought they could bolster their riding ability with booze and were only slightly mentally behind their bikes. The one thing they had in common was that each ended up as a motorcycle fatality. As of this writing we have had 42 deaths this year, the average age 22.

I'm not trying to scare you and, besides, most of the "others" thought it would not happen to them either. What can you do to increase your biking pleasure and lengthen your odds against being one of the "others"?

- Know your bike.
- Study riding fundamentals — review your multi-media Course 7. I did recently and re-learned a couple of things I had forgotten.
- Wear protective gear — helmet, boots, and leather jacket.
- Practice riding skills — on the riding range. Learn how to panic-stop before the crisis occurs.
- Know your capabilities, and ride within them.

This list can be expanded or reduced depending on your personal experience.

I hope you fully realize that my interest in motorcycling is real and that I am sincere in my desire for each of you to experience many years of biking as I have. I'm also looking forward to seeing some of you on my next touring trip.

Sincerely

LELAND K. LUKENS
Brigadier General, USAF
Director of Aerospace Safety

TO: ALL present and prospective MOTORCYCLE operators and passengers

MOTORCYCLISTS HELP motorcycling

Since all motorcycle riders are going to encounter rain at one time or another, class continues rain or shine.

That first day riding to the office last fall produced the expected comments upon arrival such as "Where's your leather jacket?"

Motorcycling still has a "Hell's Angels" image, which is probably one reason bikes still aren't very popular. The other, of course, is their safety.

Michigan is one of a dwindling number of states still requiring motorcyclists to wear helmets. Michigan also requires a separate licensing test for motorcyclists.

When some friends who work in the safety field heard I was going to take a motorcycle licensing test, they volunteered that "You ought to have your head examined instead."

No doubt about it, motorcycles are more dangerous than cars. In 1973, the last full year for which statistics are available, there were 4,300 motorcycle fatalities. That was a fatality rate of 19.0 per 100 million miles traveled, far above the 5.0 rate for all motor vehicles. There are more than 5 million motorcycles on American roads.

To try to avoid becoming a statistic, one should get a proper course of instruction. However, that is easier said than done. The Washington-based Motorcycle Safety Foundation has developed such a course, and it is available through some public schools. But it is available to only a small number of students compared with those who take automobile driver education.

Bob Irvin,
Queasy Rider?:
Middle-age motorcycle mania;
AutoWeek editor takes to two wheels
Auto Week (Detroit, Mich.) Feb. 28, 1980

Like it or not, every word that Mr. Irvin put down is true. Many people see only a "Hell's Angel" or "Darth Vader" when — and if — they see a motorcyclist. Motorcyclists are involved in more than their fair share of accidents. And getting proper motorcycle riding instructions is not as easy as finding a four-wheel teacher.

A group of motorcycle manufacturers recognized all these problems years ago and decided that motorcyclists could best solve the problems themselves. So in 1973 they created the Motorcycle Safety Foundation to promote safety. The program encompasses motorcycle training courses, research, licensing and law enforcement.

The keys to MSF's program are the Motorcycle Rider Course for pure novice riders and the Better Biking Course for those motorcyclists who have been riding or need a refresher class. However, there's no way that MSF can train all the

The second week finds chief instructor candidates such as Carl Spurgeon and Ron Hubers (front center and background) observing instructor candidates teach novices to ride.

Instructor candidates assume the roles of novice riders watching a braking demonstration as chief instructor candidate Ray Mallard backs up the instructor candidate conducting the exercise.

As with any class, instructions have to be very clear with all safety hazards pointed out in advance.

When novice riders first don helmets to become acquainted with motorcycles, many assistants are needed to help them balance the machines. Meanwhile, two instructor candidates discuss problems one of the novices is encountering.

motorcycle riders in this country at their Linthicum, Md., home. And there's also no way that they could send their instructors out to every location to conduct the courses.

One solution is to train experienced riders to be instructors. But with the motorcycle population growing at nearly one million every year, MSF by itself can't train enough instructors. What they do is school experienced instructors on how to teach skilled motorcyclists in the art and science of training novice riders. The experienced teachers become chief instructors.

This isn't a whitewash training program where showing up for class most of the time is a guarantee for credentials. Far from it. In a normal class of college and high school instructors, 20 to 30 percent fail to make the grade. Therefore, when MSF conducted a recent chief in-

continued

An instructor candidate listens carefully as chief instructor candidate Carl Spurgeon (right) reviews the high and low points of the lesson just completed.

The Motorcycle Rider Course has been put on easy-to-handle forms, making instructions clear for students, instructors and chief instructors alike.

(above)
Who's watching whom? While the novice riders listen to instructions from an instructor candidate, two chief instructor candidates, Carl Spurgeon and Ron Hubers (far right), observe teaching techniques. Meanwhile, MSF instructor Jim Rilley takes in both types of candidates.

(right)
Hand signals are very important when teaching novice riders. In the case of this figure-8 exercise the instructor candidate waves riders through the crossover area with the close coaching of chief instructor candidate Ron Hubers.

structors' course for 12 Defense Department employees without extensive backgrounds in education, the foundation projected a 50 percent washout rate. Imagine their surprise when all 10 Air Force NCOs as well as the Air Force and Navy civilians graduated with one of the highest grade totals ever recorded!

However, the new chief instructors provide a better picture of the course while expounding their enthusiasm for the program.

"There's an intense work schedule," comments Sgt Ray Mallard, Myrtle Beach AFB, S.C. "The first week we were in the classroom or on the range from 7:30 a.m. until 6 p.m. every day. Then we still did at least five hours of homework every night. After a one-day break, the second week was easier: 7 a.m. until 6 p.m. with only about two hours of homework."

"I've been going to schools in the Air Force and Navy for 20 years," notes Lee Moore, Dover AFB, Del., "but this has got to be the most intense one ever. There just wasn't any fooling around."

In other words "it's been harder

continued

than ____!" pipes in Jim Filek, a civilian with the U.S. Navy Safety Center at Norfolk, Va. "I'm not talking about just the hours, I'm talking about pressure. External pressures, self pressure and peer pressure. We all want to do the job the way it is supposed to be done — the best way."

"To be able to teach," explains SSgt Herchel "Chip" Green, Kadena AB, Japan, "you have to have more knowledge than the students do. For example, if novice riders have this much information," he makes a square the size of a postage stamp with his index fingers and thumbs. "the instructors must have this much." With that he enlarges the rectangle as large as his hands can form and still touch. "Now, chief instructors have to have this much," and he makes a rectangle the size of a newspaper page.

"You can see the first week's work in the second week when you are training instructors to teach novices," Chip declares.

"It is a real reward," adds Ray, "to witness the increased skills of the instructors and at the same time see

continued

Countersteering demonstrations are always observed from a safe distance.

Instructor and chief instructor candidates are never far from their helmets.

Braking techniques are among the fundamentals taught in the Motorcycle Rider Course.

continued

novice riders developing."

"I've picked up a lot of instructional techniques," remarks MSgt Ron Hubers, Ramstein AB, Germany. "They are important because they'll help me qualify others to be instructors."

Echoing Ron's statement, SSgt Ralph Lee, Vance AFB, Okla., says the instruction value of the course was satisfying because "the end result will be a reduction in accidents."

"They (MSF) give out a batch of information," observes MSgt Jim Dryer, Yokota AB, Japan, "and if we ever run into any trouble we've got a bunch of guys we can get hold of for help. Besides, there's always the reference materials they provide, like the Task Analysis." The Task Analysis breaks down and studies in detail all 2,500 different actions that are necessary to ride a motorcycle.

"Quality is the word," asserts MSgt Fred Yang, Castle AFB, Calif. "MSF has a total knowledge of motorcycling and they give it to the chief instructors. Besides, MSF had made me a better motorcyclist — a safe motorcycle rider."

"I was really surprised at how much research MSF has put into developing MRC and Better Biking," notes MSgt Carl Spurgeon, Norton AFB, Calif. "Because of that we'll be able to get people going in motorcycling. With facts, we can discredit 'old wives tales' and other incorrect information."

"This training is really going to pay off when it comes to choosing and teaching motorcycle safety instructors," remarks TSgt Clif Burdette, Edwards AFB, Calif. "The instructors have to be riders who can pass some basic testing criteria. They must have the ability to comprehend and then instruct. They must retain information because they have to know three or four times more than the students.

"When I look for instructors now," Clif continues, "they must have six to eight years riding experience. I'm going to interview them personally. They'll have to show me they have the motivation and maturity to be an instructor. They'll have to be able to take criticism as well as give it. They'll also have to have the endorsement of others.

"But most of all," Clif concludes, "to be an instructor they'll have to be able to act the part. And that means putting in a lot of extra time."

MSgt Wayne Trevathan, Clark AB, Philippines, stresses the value of the chief instructor training as helping him "make a good program better. With this training, motorcycle safety can become a key element in unit level safety programs. These are integrated programs with effective approaches to problems. These are programs that are tools for all commanders to use."

"The chief instructors' course is a real value to me in my job as wing ground safety manager," announces Lee Moore, "because I can insure the things we want to get done are getting done. Additionally, it helped me personally with some of the things I had been doing with teaching novices. Besides, it showed me what I can do and should be doing when delegating responsibilities to other people. I can now see the whole picture."

But probably the best summation of the chief instructors' course comes from SSgt Randolph Perry, Moody AFB, Ga. "Because of this I've developed a better attitude toward MSF and MRC," Randy says. "Before coming here I was skeptical; now I believe in it. Today I'm a lot better biker; safety means more to me."

"Sure we'll pose for group pictures as long as we are all going to become chief instructors and we can do it with a motorcycle."

Lee Moore
"After the chief instructors' course I know I'm on the right track."

Jim Dryer
"I'm capable of training instructors now. That should help with the problems of rotations overseas."

"Chip" Green
"The course has opened many possibilities."

Ron Hubers
"Wow! What's been the most value this course has given me? Do you have two hours to listen to the answer?"

Randy Perry
"It's been tough, but I believe in it."

Clif Burdette
"I can pick quality people, provide a quality course and get them out where they can do some good."

Wayne Trovathan
"I've got a lot more information to put out."

Ralph Lee
"I know where to go to get the job done. The job of turning people into safe motorcycle riders."

Fred Yang
"They've given me the facts and can back it up. So I can teach it with feelings."

Jim Filek
"MSF has given me expertise as an instructor and more knowledge about motorcycle safety."

(left)
Ray Mallard
"I can study a problem and analyze it. Gather the date associated with the problem and evaluate that. From there I can draw a conclusion as to what the problem really is and establish a goal that should overcome the problem. And once I have a goal, I can establish curricula to help motorcycle riders reach that goal."

get ready, get set.. — Organize!

We're going to give you the sweet with the sour. Organizing a motorcycle club is a good way to benefit a growing number of individuals, those who decide to take up cycling. It also takes a lot of work. We're going to examine both of these things here, in the hope some of you readers will become interested in starting motorcycle clubs on your bases.

The important point for us at DRIVER is that a motorcycle club will create a greater consciousness of safe riding habits on the part of the members. But we'll get to that later. Let's start by explaining the clubs themselves.

Motorcycle clubs are groups of people who voluntarily organize because of an interest in motorcycling. As Air Force members you can organize in one of two ways — as a "membership club" or as a "private organization." We won't go into these in detail, because they are explained in the pertinent regulations — AFR 215-1, Vol. IX for membership clubs, and AFR 34-3, Vol. XI for private organizations. Suffice it to say that membership clubs are supported by nonappropriated funds (NAFs), and private organizations are not supported by NAFs. We will not recommend one over the other; we'll just recommend that you *organize*.

People and benefits: There are a growing number of motorcyclists. People start riding because they find that a bike is much less expensive to feed than an automobile. So the potential members are out there. And the benefits of a club are also there. You just need to tell the former about the latter.

Not the least of the benefits is fun. Clubs sponsor activities on a regular basis — things like road trips, dirt racing, motocross events and the like. Competitive activities are fun not only for the contestants but also for other club members who may just want to watch.

Another great selling point could be group discounts at local motorcycle dealers. Organized motorcycle clubs are often able to arrange for discounts on parts from the dealers who would not give similar savings to individual riders. This could be a tremendous savings to such a cost-conscious group as motorcyclists.

Another advantage is the facility. Clubs have buildings that are set aside as the club headquarters and as a shop. It is very nice to have an indoor place to work on your motorcycle, away from the sometimes bad weather.

Related to this is the ready availability of assistance with your maintenance and repair problems. The other members of the club will be willing to help and give their knowledge to fellow members. This could reduce repair bills.

And, of course, there is the advantage of just having some friends around with a similar interest, to talk about cycling, and to do things with.

What do we need to get started? A good question, that. We talked to a few people who had organized clubs — or *tried* to — and got their ideas. We'll pass them along.

First, you need a group of people who are very interested in the idea of a club and committed to its establishment. As with any organized activity, there will be a core of people who will be the prime movers, the ones who get the group going and *keep* it going.

The organizers should be hard workers because they will not only have to dig through the pertinent regulations, they will also have to work at attracting members and getting the support of the commander.

Read those last six words once again, and memorize them. The people we talked to were agreed on one thing above all — if you have the support of the commander (installation or wing), you're set. An interested, enthusiastic commander can open the doors necessary to *make* the club work. You can't do it without command support; you'll only become frustrated.

Getting the support: Here's where your powers of persuasion are tested. Make the commander aware of the motorcycle accident statistics, says one of our club organizers. Show him that a cycle rider is most prone to accidents during the first six months that he rides. Stress that the club is the greatest asset for those first six months. The experienced bikers within the group give the novices help with their riding technique, and they show proper maintenance of the motorcycle. In short, the club is not only fun, it is educational.

The commander's support must be *active*. If he puts his weight behind the club and tells his staff "I want this thing to go forward," great. The commander can then provide you with the active support of his staff. You need the JAG to help with legal matters and approve the constitution, the civil engineer to provide facilities, the information officer to help with publicizing the club, and so forth. So the commander is the key.

While we're on the subject of the key people, we'll pass this along: One source said that the motorcycle club should not necessarily be *run* through the safety office. However, safety people should be closely *involved*, and it's great to have a club member who has been trained as an instructor by the Motorcycle Safety Foundation. (See story on page 16.)

Also, membership in the motorcycle club should not be made mandatory for every rider on base. Rather, the club should rely on interesting events and activities to attract members.

If the activities are interesting enough, the members will want to conform to the safety and maintenance rules of the club. To insure this conformity, which will safeguard the club's image, the club should have a probation period during which the club officers can find out who is responsible and who is not. The club can expel members who refuse to conform to safety standards or who have a lot of needless accidents. Perhaps the club could even make recommendations to the commander that an unsafe cycle rider not be allowed to ride on base. (A caution here: This is *only* for the sake of safety and the club's reputation. It is *not* for the purpose of making the club a part of the command punitive system.)

Leaders and officers: The leadership of the club should be strong and well-qualified. The *most qualified people* should be the club officers, not necessarily the officers (the brass type) or the senior NCOs.

Our sources were fairly well agreed on the officers that the clubs need. These are the president, vice president, secretary, and treasurer (these last two can be combined into one office). The president should be knowledgeable about motorcycles, but he should also be a good or-

ganizer and manager.

Other officers could include the road captain, the dirt captain, and the safety director. These three would have duties as follows: The road captain would be the man in charge when the group is on a road trip. What he says *goes*, with no exceptions. The dirt captain would have a similar function in case of off-road contests. The safety director would make sure that all members comply with certain safety standards at all times. Obviously, these three (if the duties were divided up) would have to be the most knowledgeable about motorcycle operation.

And so forth: We've already mentioend the main club selling points for the prospective members — activities, parts discounts, maintenance facility and assistance, and camaraderie. Now we'll mention a few miscellaneous items.

- The rallies are particularly important events. These should include time trials, handling tests and the like, that will show the riders if they need help. A common reaction to such events is "Hey, I thought I rode pretty well. Guess I've got a lot to learn." It is the job of the club not to make the riders feel embarrassed, but to help them learn.
- Get some publicity out on the club before you start it, using the base paper, and possibly a presentation at base orientation. Make the base population aware of what a club is and what it can do for them.
- Then be sure to take a survey on base of the people who might be interested in having a motorcycle club. If the interest isn't there and can't be developed, there's not much point in going forward.
- Another idea for attracting members is a free motorcycle maintenance seminar, conducted by a local dealer service department.
- Pay special attention to selecting the club's name, colors and emblem. They should be attractive, and they should not give the impression that the club is a "Hell's Angels" type of group.
- One of the people we talked to warned that bases located where there is a long, warm riding season have a better chance to form a successful club. It depends on your base population's interest, of course. If there's enough interest, there's nothing to prevent a successful club in a Northern-tier base.

Like we said at the beginning, it's a lot of work. But they say nothing worthwhile is ever easy, and we think motorcycle clubs, and the benefits they provide, are worthwhile.

Of course, there's still more to know. Check around with the people who have set up clubs at various bases; draw upon their experience. Then, armed with the knowledge and your enthusiasm, go see your commander. (We've provided a little side item just for him.)

Get ready, get set . . . Organize!

"And now a word to our sponsors"

Attention, commanders!

If you installation and base commanders were reading the other item here on motorcycle clubs, you noticed we said it was necessary to have your support for this idea to succeed. And we meant it. They can't do it without you.

And you should want the club to succeed, because it is one way to reach the members with the message of safe riding. Whether or not you personally favor motorcycles, you know they are increasing in numbers every day. Many of the new cyclists are military. Some members take up motorcycling for fun, and some for image. But we think many more of them start riding because the motorcycle is a much more economical form of transportation than the automobile. It is only logical that they should want to save money in getting around.

DRIVER believes your prime concern as commanders is the same as ours: The safety of people. We have to do what we can to make sure the Air Force motorcycle rider is a safe, responsible person, and the cycle club is a key tool here.

We'll state it again: It isn't enough to tell them "Good idea. Go with it." You have to actively help them by instructing your staff to give them the assistance they need. The regulations are general enough to make your support the most important factor of all in getting the clubs started.

Review the preceding item on motorcycle clubs, if you haven't read it. All those advantages that we listed are attractions for new members. Some may join for help with their cycle maintenance or for the place to work. (By the way, the facility is very necessary. Motorcycles require enough regular maintenance to make even the base auto hobby shop too expensive.) But the members will maintain their membership because of the activities of the club.

If the club activities, from road trips to cycle rallies, are interesting and fun enough to make the members *want* to participate, they will want to conform to the safety and maintenance standards of the club. We believe this would foster a more mature *general* attitude toward motorcycling — no speeding, no clowning around and, above all, *no drinking* while riding.

Peer group pressure would help insure conformance to the rules. Since the actions of each club member would reflect on the club as a whole, the members would want everyone to be as safe and law-abiding as possible.

And here's another very important consideration: The desire to emulate a role model. The people who organize the club and keep it going will have a very positive effect on the newer, less experienced riders.

Take a look at the man who is trying to organize a cycle club. He is obviously very committed to the *idea* of cycling, or he wouldn't expend the time and effort necessary to set it up. Also, he is obviously oriented toward groups of people. He is likely more mature (not necessarily in age, but in attitude) and a safer rider. His motorcycle is better maintained, he wears his helmet at all times because he believes in its value, he obeys the laws at all times, he isn't a showoff, and he doesn't take foolish chances.

In short, he's just the kind of smart motorcycle rider you'd like your people to imitate. And we believe the club members *would* begin to imitate him, and the others like him, when they saw that safe, responsible riding is still fun riding.

Finally, there is the advantage of acceptance. Your support of the motorcycle club will show the young cycle riders that you really are concerned and you're behind them. This, in turn, will give them a *positive* sense of camaraderie. After all, they don't want to think you feel they're "bad guys."

We know that their safety is your prime concern and you want them to stay alive and healthy so they can perform their portion of the Air Force mission. Please show them you support them by getting solidly behind the establishment of a motorcycle club.

tteecc!!
DOUBLE TECH
Q A

With TSgt RON LATHROP

I own an early-model high performance car that is supposed to run on premium gasoline. This is according to manufacturer's specifications. In the near future I feel premium gasoline will not be available at stations because of government or gas companies' decisions. Now I'm stuck with a car that runs on premium, but I can't purchase it any more. Help!

You're correct, the days of premium gasoline are numbered, but I don't think I'd panic soon. Even after premium disappears from the neighborhood station, 100 octane aviation gasoline will still be available at all airports of any size. The only real problem with burning aviation fuel is that it vaporizes quicker than automobile-blended gasoline so evaporation will claim a few drops more than normal.

As long as there is leaded fuel (regular) you aren't going to be hurting too much. Regular may produce more knocking than you like, but an occasional tank or two isn't going to do serious damage. In fact you'll probably want to add regular to every tank of aviation gasoline to slow the evaporation.

There are also octane-boosting additives available that many racers add to unleaded fuel when racing street stock cars. You just dump a can in with every tankful. And speaking of racing, there are many racing shops that handle high octane racing fuels. Of course, buying gasoline this way is highly impractical unless you have a safe storage area for 50-gallon drums and a way to transfer this hazardous cargo. Not to mention the dangers of pumping this explosive material as well as keeping the entire area ventilated and spill-free.

However, I don't understand why you are "stuck" with your high-performance car. If I were you I'd dump that muscle car while you still can. In today's world there is only one reason to have an early-model, high-performance machine and that is as a collector's item. For everyday transportation they just burn too much fuel in too few miles. Old race horses should be put out to pasture before they get hurt and have to be shot.

Do the rules that apply to wheel alignments on front-wheel-drive cars also apply to rear-wheel-drive cars? Is the procedure the same, and how often should it be done?

Because every car is different, there is no blanket rule on front-end alignments for either front- or rear-wheel-drive cars. Some cars have few, if any, adjustments that need to be made, while others are sensitive and must be completely readjusted every few thousand miles to prevent uneven tire wear.

Basically the job is the same on any car. Even though front-wheel-drive cars have drive mechanisms attached to the front wheels, the angles of the front wheels in relation to the road and to the car can usually still be adjusted.

The first sign that an alignment is due is uneven wear of the front tires. This often can be prevented by rotating the tires and having the alignment checked every 6,000 to 8,000 miles. It's a good investment of time and money, because the alternative is having your $75- to $120-a-piece tires wear out in less than 20,000 miles.

However, many tire manufacturers advise against rotating tires on front-wheel-drive vehicles (see Timely Topics, January 1980 DRIVER and Double Tech, April 1980 DRIVER). Because there is little load on the rear tires, they simply don't wear much. Thus, when purchasing new tires, only two will be needed and they should be put on the front.

Should the fluid in my car's power-steering unit be changed? The owner's manual makes no reference to change. Doesn't the fluid wear out, just like oil or other lubricants?

Normally power-steering fluid doesn't need to be changed. You should check the level every several thousand miles and add more as necessary. Power-steering fluid may break down if it gets too hot, but that would be about the only time changing might be necessary.

I'm planning to buy a new car soon. Undercoating is one of the options the dealers have been offering, but you didn't say anything about it in your car buying issue. Is undercoating worth the extra price? Does it do any good?

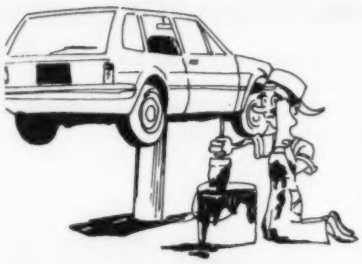
While we didn't push undercoating in the car buying articles, we did stress it in "How to Make Your Car Last Forever," June 1980 DRIVER.

On a new car, undercoating is very worthwhile, especially if you drive near the ocean, in areas where it rains frequently, or in the snow areas that dump tons of salt on the roads. Additionally, undercoatings reduce the noise level inside the car.

On older vehicles, the underside of the machine must be thoroughly cleaned before being coated. Otherwise, the undercoating merely locks in the rust which will continue to grow.

You should be aware that undercoating is a profitable car dealer sideline, so it's not surprising that they are trying very hard to sell you the service. This same service is usually available from a dealer who does nothing but undercoat for less than you would pay the car dealer. Most reputable undercoaters will provide their full coverage guarantee if you have your new vehicle treated within 90 days or 3,000 miles of purchase.

When buying undercoating make sure you are getting the type that stays soft. Hard undercoatings are chipped off by stones tossed up from under the tires. Once the undercoating is chipped away the exposed metal welcomes rust. On the other hand, the soft coatings don't chip away. When struck by objects, they absorb the blow and self-heal, leaving no exposed metal.



Could you suggest what would cause my brakes to seem spongy or weak? I had a brake job just a year ago, so I hope it doesn't mean they are worn out again.

Several things could be causing the trouble. If the pedal seems to fade as you push it — that is, if it seems to require more pushing than should be necessary — it may be air in the brake fluid system or a loss of brake flud.

Check the fluid level in the master cylinder. If the fluid is too low, you'll need to check for leaks, either in the master cylinder, wheel cylinders or hoses.

If you still have the problem, bleed the system to ensure there is no air trapped in the fluid.

If the rear brakes are improperly adjusted, this will also cause excessive pedal travel. Other problems that can cause a low brake pedal include: defective brake lines, defective caliper, distorted shoes or linings, malfunctioning master cylinder or power unit, misaligned piston and shoe assembly.

If the problem occurs only after you've been braking frequently or very hard — in stop-and-go traffic or on winding mountain roads — it may simply be due to heat. In this case, you have to pump the brakes up to use them again. If this type of brake fade is a regular problem, think about getting a hard brake lining material.

Any brake irregularity is nothing to be ignored. Have a brake mechanic check out the entire system at the first sign of trouble.

What might cause my car's steering to seem loose? The car is eight years old and the steering wheel seems too easy to turn — there is a lot of "play" in the wheel.

See a mechanic. Steering problems can pose a serious safety threat and should be taken care of immediately.

If the car has power steering, check the tension on the unit's drive belt. It's possible the belt is worn or loose and may need to be replaced. Worn shock absorbers may also cause the problem, as may loose wheel bearings or a worn steering linkage.

My car's battery is only a year old. I notice that when I look under the hood after the car has started, the battery cells sometimes spill water. I'm careful about it and keep the water in the battery at the proper level. But what could cause it?

Since the battery appears to be too new to be badly corroded — a condition that frequently causes loss of water — it's possible that the car's alternator is overcharging. Another symptom of that problem would be light bulbs burning out too soon. Have the alternator tested.

If it is charging properly, check the battery electrolyte level. It is possible that the battery has corroded, even though it is still fairly new.

EDITOR'S NOTE: Double Tech is a question and answer column in which DRIVER will attempt to make clear some of the cloudy subjects in readers' minds. Unlike other automotive magazines Q&A columns, Double Tech doesn't deal with specific questions such as, "Why does Very Rudebird smell like gasoline immediately after starting?" Instead Double Tech fields questions that are of general interest to the majority of our readers. However, when sending questions to Double Tech be sure to include all available information because this will help in finding the correct solution. If you have a question you'd like an answer to, and you feel others could use the knowledge also, send it to:

Double Tech
DRIVER Magazine
HQ AFISC/SEDD
Norton AFB, CA 92409

As with most magazines, DRIVER has a long lead time between writing and publication, so don't be surprised if it takes several months to get a reply.

COMMON

In the September 1980 DRIVER article "In Any Language" we noted that English is a widely spoken second language in many countries. However, as many people have discovered much to their chagrin, the ways Americans and British speak English are sometimes completely different.

British	American
Aerial	Antenna
Accelerator	Gas Pedal
Anti-roll bar	Stabilizer or sway bar
Energizer	Battery
Bodywork	Sheet metal
Bonnet	Hood
Boot lid	Trunk lid
Boot	Trunk
Bottom gear	First gear
Bulkhead	Firewall
Cam follower	Valve lifter
Carburettor	Carburetor
Catch	Latch
Choke/venturi	Barrel
Circlip	Snap-ring
Clearance	Lash
Crownwheel	Ring gear
Disc	Rotor
Drop arm	Pitman arm
Dynamo	Generator
Earth	Ground
Engineer's blue	Prussian blue
Estate car	Station wagon
Exhaust manifold	Header
Fast back	Hard top
Fault finding/diagnosis	Trouble shooting

British
Float chamber
Free-play
Freewheel
Gudgeon pin
Gearchange
Halfshaft
Handbrake
Hood
Hot spot
Indicator
Interior light
Layshaft
Leading shoe
Locks
Motorway
Number plate
Paraffin
Petrol
Petrol tank
'Pinking'
Propeller shaft
Quarter light
Retread
Reverse
Rocker cover
Roof rack

LANGUAGE

Normally an assignment to Great Britain doesn't present any major language barriers; however, it is always helpful to be speaking exactly the same language. Here are the automotive terms that cause the most confusion.

American	British	American
Float bowl	Saloon	Sedan
Lash	Seized	Frozen
Coast	Side indicator light	Side marker light
Piston pin or wrist pin	Side light	Parking light
Transmission	Silencer	Muffler
Axleshaft	Spanner	Wrench
Parking brake	Sill panel	Rocker panel
Soft top	Split cotter	Lock
Heat riser	Split pin	Cotter pin
Turn signal	Steering arm	Spindle arm
Dome light	Sump	Oil pan
Countershaft	Tab washer	Tang
Primary shoe	Tailgate	Liftgate
Latches	Tapper	Valve lifter
Freeway	Thrust bearing	Throw-out bearing
License plate	Top gear	High
Kerosene	Trackrod	Tie-rod
Gasoline	Trailing shoe	Secondary shoe
Gas tank	Transmission	Whole drive line
'Pinging'	Tyre	Tire
Driveshaft	Van	Panel Wagon
Quarter window	Vice	Vise
Recap	Wheel nut	Lug nut
Back-up	Windscreen	Windshield
Valve cover	Wing/mudguard	Fender
Car-top carrier		

HAPPY Endings

Once upon a time (as a matter of fact it was last summer) a naval petty officer was riding his motorcycle home after work. He was following the same route he took every day, about the same hour and in the same traffic. The weather was perfect. In fact everything seemed perfect.

As he approached a corner he had rounded daily for over a year, he slowed to the speed he always used at that spot. This time, however, something was different. Someone (a wicked witch maybe?) had put a thick coating of dry sand on the road surface. Wheels lost traction and in a split second rider and machine were taking separate routes.

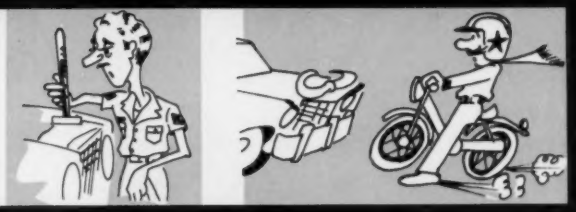
Now comes the fairy-tale part. The rider slid across the pavement on his derriere until momentum gave way to friction and he came to a burning halt. Was our hero wearing boots, helmet, gloves, leathers? No. Was his skin and flesh scraped from his bones, leaving him a sobbing, quivering mess waiting to be scooped up by an ambulance crew? No. All that sliding had been done on the buttock under the left rear pocket, which held a fat wallet. The wallet was completely burned through. Some plastic credit cards were consumed. But that was all the damage.

MORAL: Sometimes luck will save your bacon. But don't count on it.

(DRIVER thanks AE1 Donald C. Meitl, USN, for the details of this true story. Photos by PH2 K. Bathe.)

BACKfire

LETTERS to the EDITOR



MOPED/BICYCLE LAWS

During the two years that I've been driving and riding my moped here at Andrews AFB I've seen bicycle riders going against traffic, not stopping at stop signs and not using proper hand signals. Now you may wonder why I mention bicycles when I want to talk of mopeds. Well, that is easy: According to Maryland State Laws, mopeds come under the bicycle laws, as far as I know of at present.

But there is more confusion when one asks about mopeds than anything else. I feel that requiring a helmet is not the place to stop. There are safe driving courses for automobiles and motorcycles. But there is nothing available for people just learning or relearning to ride a bike. With the current gas crunch, the requirement for safe bicycle riding should be just as important as defensive driving is for automobiles and motorcycles.

SSgt Michael P. Huyter, USAF
Andrews AFB, MD 20335

The reference is to Air Force's requirement that moped riders wear helmets. So far as state and local laws are concerned, there is a real mish-mash when it comes to mopeds. Last October the Department of Transportation issued guidelines to the states for the development of moped safety programs and uniform rules. DOT says mopeds must be viewed as motor vehicles.

OVERHEATING

In the August '80 DRIVER you had an article on the cooling system of autos. One item sort of hit home. That article was titled "Oh, That Smarts!"

About two months ago my wife brought the car to me saying that it was overheating. I raised the hood and waited approximately 35 to 40 minutes for it to "cool" down. Assuming that it had, because the radiator cap was only warm to the touch, I proceeded to open the cap. The relief valve on the cap failed to wrk and I got the surprise of my life. I received second- and third-degree burns on my left arm from the wrist to the elbow. Luckily I didn't have my face over the radiator.

We wondered why the car hadn't cooled down properly and investigated further into the cause. First of all the radiator cap was faulty. (It was only four months old). Second, the thermostat had frozen shut, not allowing the car to cool down as it should have.

This should serve as a warning to others: Check your radiator caps frequently and those hidden thermostats. It could save you a lot of pain, I know. I had to learn the hard way.

Thanks for your time and keep up the good work.

SSgt Tony Cole, USAF
2849 Hq Sq
Hill AFB, UT 84056

AUTOMOBILE CHECKOUTS

I have just read SSgt Dostal's article "One Dark Night," August DRIVER, and agree with most of the points he made. However, I feel that to *remedy* design shortcomings with sandpaper, etc., is missing the boat!

I own a 1967 Mini with switches similar to those in two of the photos accompanying the article. In nearly nine years of ownership of my Mini I cannot remember hitting the wrong switch — not because I am so perfect, but rather I did some self-training first.

When I went through pilot training, and with every transition to a new aircraft since, I was subjected to sometimes seemingly countless hours of COCKPIT TIME! Time spent sitting in the cockpit of an unfamiliar plane memorizing where the dozens of switches, knobs, handles, etc., are located, what they did, how they felt, and what motions were required to operate them. Although I realized that such practice made each checkout easier, it all came home while flying a hundred night missions in the F-4 in Southeast Asia where we flew with virtually blacked-out cockpits under very stressful situations. There it quickly became second nature to be able to operate any switch without ever looking or even thinking about.

I have carried this premise on to my own personal "automobile checkouts." When I recently installed foglight switches in my BMW I spent some time practicing the best way to reach and activate each of the switches. I also required my son to spend several hours in each of our cars doing "cockpit time" until he could pass a "blindfold cockpit check" to my satisfaction before teaching him to drive.

I never drive a rented or borrowed car until I've spent at least a few minutes investigating all of the "cockpit" and I feel comfortable with it.

Col Kenneth L. Deal, USAF
HQ USAFE/RCS
APO New York 09021

CORRECTION

In reference to the article "In Any Language" in your September '80 issue.

I'd like to congratulate you on publishing an article that is useful to literally thousands of servicemembers overseas. Many of the men that work for me have foreign cars and must rely on local dealers for parts, service and repairs. Your "dictionary" is most useful to them.

One minor correction . . . shock absorber in German is STOSS-DAMPER not Dämpfung as you have it listed. Dämpfung is the act of damping, more commonly used in association with steam systems.

Keep up the good work!

CW2 Harold J. Day, USA
Commanding
USA FESA
FES Det 1
APO New York 09081

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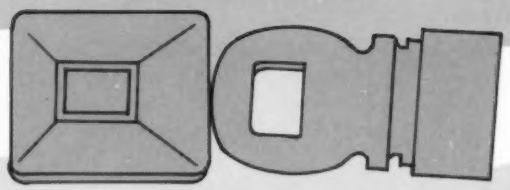

Figureitout

INSTRUCTIONS: Complete the sentences. Then, transfer the letters from the clue section to the corresponding numbers in the Safety Tip section. Check back and forth between the sections to fill in the blanks.

Clues

The street is no place to _____. __ __ __ __
31 38 3 16

Safety is up to _____. __ __ __
7 26 35

Pass in the _____ lane. __ __ __ __
5 24 21 14

Anyone who drives carelessly is
a real yo-__. __ __
33 22

Use your _____ __ __ __ __ __ __
to stop. 15 10 30 4 20 28

Running into _____ __ __ __ __ __
damages front-end alignment. 37 2 39 19 11

Careless driving can __ __ __ __ __ __ __
get you in _____. 18 23 8 27 1 17 12

The British spell
tire, _____. __ __ __ __
32 25 36 6

Another word
for car is _____ __ __ __ __
13 9 29 34

SAFETY TIP: __ __ __ __ __ __ __ __ __ __
1 2 3 4 5 6 7 8 9 10

__ __
11 12 13 14 15 16 17 18 19 20 21 22 23 24

__ __ __ __ __ __ __ __ __ __ __ __
25 26 27 28 29 30 31 32 33 34 35 36

__ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __